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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/633,059

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Dong-Woo Kim

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3945

7590

12/24/2002

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EXAMINER

MILLER, BRANDON J

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/633,059

Applicant(s)

KIM, DONG-WOO

Examiner

Brandon J Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtinen in view of Birrell.

Regarding claim 1 Lehtinen teaches a mobile phone for storing and reproducing multimedia data with a keypad having a plurality of alphanumeric keys used for commanding a phone module to make mobile communication and to manipulate multimedia data (see abstract, pg. 1, lines 15-18, pg. 9, lines 18-20 and Fig. 2). Lehtinen teaches controlling ordinary functions of a mobile phone (see pg. 5, lines 9-13) and enabling multimedia data to be downloaded from a personal computer to a mobile phone according to a key input (see pg. 5, lines 11-19, 25-28, & 33-36 and pg. 6, lines 20-22). Lehtinen teaches an RS-232 connector for connecting a phone module and personal computer to exchange multimedia data and other data (see pg. 5, lines 10-19). Lehtinen does not teach manipulating digital audio data, downloading digital audio data from a computer, enabling the sound of digital audio data to be reproduced according to a key input through a key pad, a digital audio data module for storing digital audio data from a phone module for playing or stopping sound reproduced from stored digital audio data, for rewinding sound reproduced, and for fast-forwarding the sound reproduced. Birrell teaches manipulating and enabling the sound of digital audio data to be reproduced according to a key input through a

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key pad (see col. 4, lines 13-14 and col. 5, lines 15-19). Birrell teaches downloading digital audio data from a computer (see col. 4, lines 42-45). Birrell also teaches storing digital audio data for playing or stopping sound reproduced from stored digital audio data (see col. 7, lines 17-20 & 60-63), for rewinding sound reproduced, and for fast-forwarding the sound reproduced (see col. 5, lines 31-33 and FIG. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Lehtinen adapt to include manipulating digital audio data, downloading digital audio data from a computer, enabling the sound of digital audio data to be reproduced according to a key input through a key pad, a digital audio data module for storing digital audio data from a phone module for playing or stopping sound reproduced from stored digital audio data, for rewinding sound reproduced, and for fast-forwarding the sound reproduced because this would allow for a cellular communications system that provides digital audio data to wireless subscribers.

Regarding claim 2 Lehtinen teaches digital audio data that is MPEG (Moving Pictures Engineering Group) ½ Layer-3, or MP3 (see pg. 24-27). Birrell teaches digital audio data that is MP3 (see col. 6, lines 1-3).

Regarding claim 4 Lehtinen teaches reproducing multimedia data in a mobile phone and downloading multimedia data stored in a personal computer to a memory device of a mobile phone (see abstract, pg. 1, lines 15-18, pg. 9, lines 18-20 and Fig. 2). Lehtinen teaches a mobile phone that can be connected to a personal computer by means of a link, a link for converting personal computer parallel data to mobile phone serial data and vice versa (see pg. 5, lines 10-19, 25-28, & 33-36 and pg. 6, lines 20-22). Lehtinen does not teach selectively reproducing or playing a digital audio data stored in a memory device. Birrell teaches reproducing or playing a

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digital audio data stored in a memory device (see col. 7, lines 17-20 & 60-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Lehtinen adapt to include selectively reproducing or playing a digital audio data stored in a memory device because this would allow for a cellular communications system that provides digital audio data to wireless subscribers.

Regarding claim 5 Lehtinen and Birrell teach a device as recited in claim 2 and is rejected given the same reasoning as above.

Regarding claim 6 Birrell teaches selecting digital audio data play mode from a main menu, displaying a detailed menu for playing digital audio data, and sequentially playing digital audio data upon selecting a play key in a detailed menu (see col. 5, lines 15-19 and col. 7, lines 17-20 & 60-63).

Regarding claim 7 Birrell teaches rewinding digital audio data upon selecting a rewind key (see col. 5, lines 31-33).

Regarding claim 8 Birrell teaches replaying digital audio data and a rewind key for track scanning functions (see col. 5, lines 31-33 and col. 7, lines 62-65).

Regarding claim 9 Birrell teaches a fast forward key for controlling track scanning functions (see col. 5, lines 31-33).

Regarding claim 10 Birrell teaches a device as recited in claim 9 and is rejected given the same reasoning as above.

Regarding claim 11 Birrell teaches fast-forwarding a playing position of audio data and controlling track scanning functions (see col. 5, lines 31-33).

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Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtinen in view of Birrell, Knox, and Campisano.

Regarding claim 3 Lehtinen and Birrell teach a device as recited in claim 1 except for a memory device for storing MP3 digital audio data, a central processing unit for controlling the MP3 audio data received from a phone module to be stored in or reproduced from a memory device, an MP3 decoder for de-multiplexing MP3 audio data into control data and audio data for Huffman-decoding audio data from run-length coded compressed signals to original length signals, subjecting each sub-band of a signal to re-quantization and re-scaling according to control data, recovering result data by an inverse discrete cosine transformation, inversely filtering each sub-band to finally obtain PCM (Pulse Code Modulation) data, or a digital to analog converter for converting PCM audio data delivered from a MP3 decoder into corresponding analog audio data. Birrell does teach a memory device for storing MP3 digital audio data (see col. 4, lines 40-43). Birrell teaches a processing unit for controlling the MP3 audio data received to be stored in or reproduced from a memory device (see col. 4, lines 10-12 & 40-43 and col. 5, lines 9-14). Birrell teaches a digital to analog converter for converting audio data delivered from a MP3 decoder into corresponding analog audio data (see col. 5, lines 65-67 and col. 6, lines 1-4). Birrell teaches decompressing audio data from compressed signals to original length signals (see col. 5, lines 23-24 & 65-67). Knox teaches a decoder for de-multiplexing audio data into control data and for decoding audio data from compressed signals to original length signals (see col. 5, lines 3-7 & 35-42). Knox teaches recovering a digital audio signal according to control data (see col. 4, lines 34-43 and col. 5, lines 2-8). Knox teaches recovering data by obtaining demodulated a received data signal (see col. 4, lines 22-25 & 28-

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30). Campisano teaches data for Huffman decoding data from a compressed signal, subjecting a signal to re-quantization and re-scaling, and PCM data (see col.4, lines 45-48 & 63-65, col. 6, lines 51-54 and col. 9, lines 5-8). It would have been obvious to one skilled in the art at the time the invention was made to make the Lehtinen adapt to provide known MP3 decoding methods including a memory device for storing MP3 digital audio data, a central processing unit for controlling the MP3 audio data received from a phone module to be stored in or reproduced from a memory device, an MP3 decoder for de-multiplexing MP3 audio data into control data and audio data for Huffman-decoding audio data from run-length coded compressed signals to original length signals, subjecting each sub-band of a signal to re-quantization and re-scaling according to control data, recovering result data by an inverse discrete cosine transformation, inversely filtering each sub-band to finally obtain PCM (Pulse Code Modulation) data, or a digital to analog converter for converting PCM audio data delivered from a MP3 decoder into corresponding analog audio data because this would allow for a wireless transmitter and digital receiver for transmitting and receiving digital audio information.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bottum U.S Patent No. 6,014,569 discloses a mobile interactive radio.

Ausems U.S. Patent No. 6,434,403 discloses a personal digital assistant with wireless telephone.

Alperovich U.S. Patent No. 6,317,609 discloses a system and method for transporting digital speech and digital pictures.

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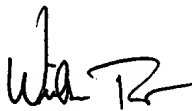
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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December 20, 2002

  
WILLIAM TROST  
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